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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,882	06/28/2001	Ji Chul Lim	8733.449.00	3035

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EXAMINER

LANEAU, RONALD

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 02/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/892,882

Applicant(s)

LIM ET AL.

Examiner

Ronald Laneau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,9,17 and 19 is/are rejected.
- 7) ☒ Claim(s) 2-8,10-16,18 and 20-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-25 are presented for Examination. The results of the examination are the followings.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 9, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's Admitted Prior Art (AAPA) in view of Shirahashi et al (US 5,285,301).

As per claims 1 and 19, the AAPA discloses a liquid crystal display (LCD) panel, comprising: a plurality of data lines included in a display area of the LCD panel, a plurality of gate lines crossing the data lines, a plurality of switching devices positioned at intersections

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between the data lines and the gate lines, a plurality of pixel electrodes each driven by one of the switching devices (see bgrd. of the invention, figs. 4 and 5). Basically the AAPA discloses every element of the claimed invention except a dummy data line included in a non-display area outside the display area and formed in parallel to the data lines. Shirahashi et al is cited to teach a liquid crystal display device having peripheral dummy lines i.e. the dummy data lines are in a non-display area outside the display area and formed in parallel to the data lines as claimed (see figs. 1 and 15, DDL).

It would have been obvious to one of ordinary skill in the art to utilize the peripheral dummy data line taught by Shirahashi et al into the AAPA because it would provide a liquid crystal display device wherein the likelihood of breakage of the outermost signal line is greatly reduced (col. 1, lines 61-65).

As per claim 9, the AAPA discloses a liquid crystal display (LCD) panel, comprising: a plurality of data lines included in a display area of the LCD panel, a plurality of gate lines crossing the data lines, a plurality of switching devices positioned at intersections between the data lines and the gate lines, a plurality of pixel electrodes each driven by one of the switching devices (see bgrd. of the invention, figs. 4 and 5). Basically the AAPA discloses every element of the claimed invention except a dummy data line for compensating a capacitor value difference of an adjacent pixel electrode thereto. Shirahashi et al is cited to teach a liquid crystal display device having peripheral dummy lines which can compensate a capacitor value difference of an adjacent pixel electrode since each pixel includes a capacitor C_{add} as claimed (see fig. 15, C_{add}).

It would have been obvious to one of ordinary skill in the art to utilize the dummy data line taught by Shirahashi et al into the AAPA for the same reasons given in claims 1 and 19.

As per claim 17, this is a method claim corresponding to the apparatus claim 9 and is therefore rejected on the same basis set forth in claim 9.

Allowable Subject Matter

5. Claims 2-8, 10-16, 18, and 20-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Shirahashi et al teach a peripheral (outside or non-display area) dummy data line but do not teach:

As per claims 2, 10, and 18, a liquid crystal display panel wherein the dummy data line is supplied with a signal having an inverted phase with respect to data on a one of the data lines adjacent to the dummy data line.

As per claims 3-8 and 11-16, a liquid crystal display panel further comprising a plurality of dummy switching devices positioned intersections between the dummy data line and the gate lines; and a plurality of dummy pixels electrodes each connected to one of the dummy switching devices.

As per claims 20-25, an LCD device further comprising: dummy voltage supply means for supplying a signal such that a first voltage charged into a first one of the pixel electrodes which is adjacent to the dummy voltage line becomes approximately the same as a second

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voltage charged into a second one of the pixel electrodes disposed adjacent to the first one of the pixel electrodes.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Tsugawa (US 2001/0022584) teaches a portable information processing unit wherein a user can arbitrarily choose between turning on a backlight to obtain a bright and legible screen or seeing the screen through natural reflection light while turning off the backlight.
- Isogawa et al (US 6,466,196) teach a method of driving backlight, circuit for driving backlight, a backlight for use for a display panel and providing a level-setting means for outputting a signal having a level corresponding to the adjusting level of brightness of the image displayed on the display panel.
- Weindorf et al (US 6,388,388) teach a brightness control system for a backlight display device that uses the efficiency of the back light to control the backlight to a desired brightness or luminance.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Laneau whose telephone number is 703-305-3973. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:00 PM or via email: ronald.laneau@uspto.gov.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached at 703-305-4709.

10. **Any response to this action should be mailed to:**

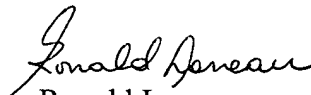
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is (703) 306-0377.


Ronald Laneau
Examiner
Art Unit 2674

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January 29, 2003